

Please cancel ~~claims~~ 4, 9, 24 and 68-81 without prejudice or disclaimer.

Please amend claims 1, 21, 29, 34, 41 and 42 as follows:

1. (Amended) A method of producing a semiconductor member[, ] comprising the steps of:

forming a porous layer in a surface region of a first substrate;

forming a semiconductor layer on the porous layer by liquid phase epitaxy using a melting solution in which elements for forming the semiconductor layer to be grown are dissolved up to a supersaturated state or a substantially supersaturated state;

bonding a second substrate to a surface of the semiconductor layer opposite to a semiconductor layer surface bonded to the first substrate; and

separating the first substrate from the semiconductor layer by utilizing the porous layer to transfer the semiconductor layer to the second substrate.

21. (Amended) A method of producing a solar cell[,]  
comprising the steps of:

Corral  
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[illegible][illegible]

~~A3~~  
Sub  
B4

C. ind.  
A3

separating the first substrate from the semiconductor layer by utilizing the porous layer to transfer the semiconductor layer to the second substrate;

wherein the liquid phase epitaxy includes that a melting solution in which elements for forming the semiconductor layer to be grown are dissolved [upto] up to a desired concentration is used and the melting solution is brought in contact with a surface of the porous layer while a surface temperature of the porous layer is made lower than a temperature at which elements in the melting solution having the desired concentration are saturated.

A4  
SUB  
34. (Amended) A method according to claim 33, further comprising a step of separating [thed] the second substrate to transfer the semiconductor layer onto the third substrate.

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41. (Amended) A method according to claim 21, wherein before the bonding of the second substrate, an impurity is introduced into the semiconductor layer.

42. (Amended) A method according to claim 21, wherein before the bonding of the second substrate, an impurity is introduced into the semiconductor layer to form a p-n junction.

Please add new claims 87-108 as follows:

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--87. A method according to claim 29, wherein the semiconductor layer is formed on the porous layer, the semiconductor layer comprising a region formed by vapor phase epitaxy and a region formed by liquid phase epitaxy in this order.

88. A method according to claim 29, further comprising a step of removing the porous layer remaining on the surface of the first substrate after the first substrate is separated from the semiconductor layer.

89. A method according to claim 29, wherein the liquid phase epitaxy is conducted under a reducing atmosphere.

90. A method according to claim 29, wherein the liquid phase epitaxy includes that a melting solution in which elements for forming the semiconductor layer to be grown are dissolved is brought in contact with the porous layer.

91. A method according to claim 29, wherein the liquid phase epitaxy includes that a melting solution in which elements for forming the semiconductor layer to be grown are dissolved is brought in contact with an epitaxial layer formed on the porous layer.

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92. ~~B~~ A method according to claim 91, wherein the epitaxial layer is formed by vapor phase epitaxy.

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93. ~~C~~ A method according to claim 87, wherein the vapor phase epitaxy is conducted by decomposing a source gas while supplying a gas for forming a reducing atmosphere.

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94. A method according to claim 29, wherein the bonding step of the second substrate is conducted using an adhesive.

95. A method according to claim 94, wherein the adhesive includes a water-soluble adhesive.

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96. A method according to claim 29, further comprising a step of providing a third substrate on a separate surface for transferring the semiconductor layer onto the second substrate.

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97. A method according to claim 96, further comprising a step of separating the second substrate to transfer the semiconductor layer onto the third substrate.

98. A method according to claim 29, wherein the second substrate has a water permeability.

99. A method according to claim 97, wherein the separation of the second substrate is conducted by the deterioration of adhesion of the adhesive used for bonding of the second substrate.

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100. A method according to claim 99, wherein the deterioration of the adhesion is conducted by a liquid that has passed through the second substrate.

101. A method according to claim 99, wherein the adhesive is water-soluble, and the deterioration of the adhesion is conducted by a water that permeates the second substrate.

102. A method according to claim 29, wherein an impurity in the porous layer is diffused into the semiconductor layer.

103. A method according to claim 29, wherein the liquid phase is conducted with indium as a solvent.

104. A method according to claim 29, wherein before the bonding of the second substrate, an impurity is introduced into the semiconductor layer.

105. A method according to claim 29, wherein before the bonding of the second substrate, an impurity is introduced into the semiconductor layer to form a p-n junction.

106. A method according to claim 29, wherein the second substrate has an electroconductive surface.